

Amendment to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) An apparatus for filtering a highly pressurized fluid, wherein the fluid is pressurized by a pump upstream of said apparatus, comprising:

a vertical housing having a transparent outer cover, a fluid inlet for communicating a highly pressurized fluid into said housing, and a fluid outlet for communicating said highly pressurized fluid downstream of said housing ~~and said outer cover of said housing having a bottom portion with a first inner diameter and an upper portion with a second inner diameter, wherein said first inner diameter is larger than said second inner diameter;~~

a filter element disposed within said housing between said fluid inlet and said fluid outlet for filtering said fluid;

a fluid impervious cover disposed on ~~covering at least an upper portion of~~ said filter element to define a fluid impervious region of said filter element adjacent to a top end of said filter element and a fluid permeable region of said filter element adjacent to a bottom end of said filter element;

a relief valve mounted in a top of said filter element, and said relief valve opening at a predetermined pressure; ~~and~~

said outer cover of said housing having a bottom portion with a substantially continuous first inner diameter defined throughout said bottom portion, wherein said bottom portion of said outer cover extends at least from said bottom end of said filter element to said fluid impervious region of said filter element to define a lower predetermined volume

between said bottom portion of said outer cover and said filter element; and

said outer cover of said housing having an upper portion with a substantially continuous second inner diameter defined throughout said upper portion, wherein said upper portion extends from said top end of said filter element to said bottom portion to define an upper predetermined volume between said upper portion of said outer cover and said filter element, and said second inner diameter being smaller than said first inner diameter,

~~said bottom portion of said outer cover of said housing and said cover of said filter element forming a lower predetermined volume captured therebetween and said upper portion of said cover of said housing and said cover of said filter element forming an upper predetermined volume captured therebetween,~~ wherein the level of fluid within said housing provides a visual indicator as to the overall condition of the filter element.

2. (Previously Presented) The apparatus stated in claim 1, further comprising:

said level of said fluid rising above said lower predetermined volume between said cover of said housing and said cover of said filter element when said filter element is substantially clean.

3. (Original) The apparatus stated in claim 1, further comprising:

said outer cover of said housing having integral ribs formed therein for structurally supporting said outer cover.

4-9. (Canceled)

10. (Previously Presented) The apparatus stated in claim 1, further comprising:

said top of said filter element having an aperture whereby said relief valve opens and closes said aperture in response to a predetermined pressure differential across said filter element; and

a strip of thermal sensitive material having one end connected to said top of said filter element and a second end having a seal connected thereto, and said strip moving from a sealed, closed position, wherein said strip contracts when the temperature within said housing is below a predetermined temperature such that said seal closes said aperture, and an open position, wherein said strip expands when the temperature within said housing is above a predetermined temperature such that said seal disengages said aperture.

11. (Currently Amended) A method for filtering a highly pressurized fluid, wherein the fluid is pressurized by a pump upstream of said apparatus, the steps comprising:

providing a vertical housing having a transparent outer cover, a fluid inlet, and a fluid outlet, ~~and said outer cover having a bottom portion with a first inner diameter and a top portion with a second inner diameter, wherein said first inner diameter is larger than said second inner diameter;~~

providing a filter element within said housing between said fluid inlet and said fluid outlet wherein said filter element has a cover disposed on said filter element to define a fluid impervious region of said filter element adjacent to a top end of said filter element and a fluid permeable region of said filter element adjacent to a bottom end of said filter element ~~a fluid impervious cover covering at least an upper portion of said filter element;~~

providing mounting a relief valve on top of said filter element, and said relief valve opening at a predetermined pressure;

~~establishing a lower and upper predetermined volume within said bottom portion of~~

~~said outer cover of said housing and said upper portion of said outer cover of said housing,~~
~~respectively, between said outer cover of said housing and said cover of said filter element;~~
and

establishing a lower predetermined volume between a bottom portion of said outer cover and said filter element, said bottom portion having a substantially continuous first inner diameter defined throughout said bottom portion and said bottom portion extending at least from said bottom end of said filter element to said fluid impervious region of said filter element;

establishing an upper predetermined volume between an upper portion of said outer cover and said filter element, said upper portion having a substantially continuous second inner diameter defined throughout said upper portion, said upper portion extending from said top end of said filter element to said bottom portion, and said second inner diameter is smaller than said first inner diameter; and

supplying a highly pressurized fluid to said fuel inlet and allowing said pressurized fuel to exit through said fuel outlet wherein a volume of air is determined within said housing by the relationship $PV=nRT$, wherein P is pressure, V is volume, n is the number of molecules, R equals the gas constant, and T is the temperature, and wherein a level of said fluid within said housing provides a visual indicator as to the overall condition of the filter element.

12. (Previously Presented) The method stated in claim 11, wherein the steps further comprise:

establishing said level of said fluid above said lower predetermined volume in said housing when said filter element is substantially clean.

13. (Previously Presented) The method stated in claim 11, wherein the steps further comprise:

structurally supporting said upper cover of said housing with integral ribs formed therein.

14. (Original) The method stated in claim 11, wherein the steps further comprise:

providing a conventional diesel fuel as said fluid.

15. (Previously Presented) The method stated in claim 14, wherein the steps further comprise:

pressurizing said diesel fuel between approximately 116 psi and approximately 188 psi.

16. (Previously Presented) The method stated in claim 15, wherein the steps further comprise:

establishing said volume of air in a range between approximately 3.65 cubic inches and approximately 2.25 cubic inches.

17. (Original) The method stated in claim 11, wherein the steps further comprise:

providing a conventional motor oil as said fluid.

18. (Previously Presented) The method stated in claim 17, wherein the steps further comprise:

pressurizing said motor oil between approximately 60 psi and approximately 80 psi.

19. (Previously Presented) The method stated in claim 18, wherein the steps further comprise:

establishing said volume of air in a range between approximately 4.06 cubic inches and approximately 3.04 cubic inches.

20. (Previously Presented) The method stated in claim 11, wherein the steps further comprise:

providing an aperture in said top of said filter element whereby said relief valve opens and closes said aperture in response to a predetermined pressure differential across said filter element; and

providing a strip of thermal sensitive material connected to said top of said filter element and having a seal connected thereto, wherein said strip contracts in response to when the temperature within the housing is below a predetermined temperature such that said seal engages and closes said aperture, and wherein said strip expands in response to the temperature within the housing being above a predetermined temperature such that said seal disengages said aperture.

21. (Previously Presented) The apparatus stated in claim 1, wherein the ratio of said lower predetermined volume to said upper predetermined volume is at least approximately 2.7.

22. (Previously Presented) The apparatus stated in claim 1, further comprising:

a first clearance distance defined between said bottom portion of said cover and said cover of said filter element; and

a second clearance distance defined between said upper portion of said cover of said housing and said cover of said filter element, wherein the ratio of said first clearance distance to said second clearance distance is at least approximately 3.3.

23. (Previously Presented) The method stated in claim 11, wherein the ratio of said lower predetermined volume to said upper predetermined volume is at least approximately 2.7.

24. (Previously Presented) The method stated in claim 11, wherein a first clearance distance is defined between said bottom portion of said cover and said cover of said filter element, and a second clearance distance is defined between said upper portion of said cover of said housing and said cover of said filter element, wherein the ratio of said first clearance distance to said second clearance distance is at least approximately 3.3.